

ABSTRACT

5 The invention discloses a method for breeding transgenic plants with the high
antiviral property and the application of the method. The inventive method comprises
the following steps of: a. checking the frequency of codon usage in a host and
determining the rare codons in the host, modifying the codons in a target gene so that
some codons in the target gene are mutated into the rare synonymous codons in the host
plant; b. constructing a vector containing the target gene with the codon modifications, to
10 be used for transforming plants; c. transforming the plants with the above recombinant
vector to obtain the regenerative transgenic plants; d. detecting the transformed plants,
screening the transgenic plants in which gene silencing occurs in the target gene, and
thereby obtaining the transgenic plants with the high antiviral property. The invention
method can be used in breeding highly efficient and stable antiviral transgenic plants.